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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/610,461	07/05/2000	Juha Ojanpera	460-009524-US(PAR)	4189

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PERMAN & GREEN
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FAIRFIELD, CT 06824

EXAMINER

OPSASNICK, MICHAEL N

ART UNIT	PAPER NUMBER
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2655

DATE MAILED: 02/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/610,461

Applicant(s)

OJANPERA, JUHA

Examiner

Michael N. Opsasnick

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al (5819212) in view of Yasunaga et al (6453288).

As per claims 1,21,27,30, and 38, Matsumoto et al (5819212) teaches coding a audio signal:

“examining a part of the audio signal.....to be coded.....producing a set of predicted.....pitch predictor orders” as LPC analysis, Fig. 1, subblock 130

“determining a coding efficiency....using the determined coding efficiency.....to be coded....by using information....audio signal to be coded” as band splitting and coding at different rates (fig. 5, col. 10 lines 19-65) and V/UV decisions based on the input signal (col. 11 lines 1-24).

Matsumoto et al (5819212) does not explicitly teach using the determined coding efficiency to select a pitch predictor order for the selected coding method, however, Yasunaga et al (6453288) teaches selecting the pitch predictor order according to the coding mode (col. 15 lines 1-10; abstract). Therefore, it would have been obvious to one of ordinary skill in the art of audio coding to modify the teachings of Matsumoto et al (5819212) with using the determined coding efficiency to select a pitch predictor order for the selected coding method because it would effectively require less memory storage (to store for all possible coding modes) compared to coding according to the mode required (col. 3 line 55 – col. 4 line 13).

As per claim 2, Matsumoto et al (5819212) teaches predictive coding (Fig. 1, subblock 130)

As per claims 3,29,32,36,37, and 39, Matsumoto et al (5819212) teaches prediction based on input audio (Fig. 1, subblock 130)

As per claims 4,22,28,31, Matsumoto et al (5819212) teaches CELP based encoding using error calculations (col. 10 lines 59-65)

As per claims 5-13,23,35, Matsumoto et al (5819212) teaches the calculation of distortion errors based on frequency information and coding efficiency (col. 20 lines 20-45)

As per claim 14, Matsumoto et al (5819212) teaches MDCT (col. 18 lines 23-50)

As per claims 15,24,33, and 34, Matsumoto et al (5819212) teaches data order, lag, pitch predictor coefficients, and error information (col. 18, lines 20-65)

As per claims 16,17, and 25, Matsumoto et al (5819212) teaches input speech frames (Fig. 6a,b, and c)

As per claims 18,19, Matsumoto et al (5819212) teaches a least squares method, and the coding error derived from the predictive error (col. 20 lines 15-58).

As per claims 20,26, Matsumoto et al (5819212) teaches a transmitting device (col. 1 lines 1-15)

Response to Arguments

3. Applicant's arguments filed 11/24/2003 have been fully considered but they are not persuasive. As per the argument that Yasunaga does not teach pitch predictive order using coding efficiency, examiner argues that the pre-selector chooses the pitch according to improving the efficiency of the system (in terms of memory storage). With respect to the arguments that there is no motivation to combine the references, examiner reiterates the stated reasons for combining as presented above: 'Therefore, it would have been obvious to one of ordinary skill in the art of audio coding to modify the teachings of Matsumoto et al (5819212) with using the determined coding efficiency to select a pitch predictor order for the selected coding method because it would effectively require less memory storage (to store for all possible coding modes) compared to coding according to the mode required (col. 3 line 55 – col. 4 line 13).' – with the col. 3 –col. 4 reference pertaining to the Yasunaga reference. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense

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necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Conclusion

4. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872 9314,

(for informal or draft communications, please label "PROPOSED" or "DRAFT")


Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Opsasnick, telephone number (703)305-4089, who is available Tuesday-Thursday, 9AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Doris To, can be reached at (703)305-4827. The facsimile phone number for this group is (703)872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group 2600 receptionist whose telephone number is (703) 305-4750, the 2600 Customer Service telephone number is (703) 306-0377.

mno
2/04/2004


DORIS H. TO 2/5/04
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600